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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,062	08/29/2003	Daigo Aoki	123851	8988
25944 7590 06/15/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER KUGEL, TIMOTHY J	
			ART UNIT 1712	PAPER NUMBER
			MAIL DATE 06/15/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	Application No.	Applicant(s)	
	10/651,062	AOKI ET AL.	
	Examiner	Art Unit	
	Timothy J. Kugel	1712	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 21 May 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See attached detailed action.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

### **DETAILED ADVISORY ACTION**

1. Claims 50, 52-56, 63 and 65 are pending as amended on 5 January 2007, claims 1-49, 51, 55-62, 64, 66 and 67 being cancelled.
2. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 50-55, 64 and 65 stand rejected under 35 USC 103(a) as being unpatentable over US Patent 6,294,313 (Kobayashi hereinafter).

Kobayashi teach a photoconductive (Column 1 Lines 39-56) wettability-changing layer not more than 10  $\mu\text{m}$  thick (Column 31 Lines 54-58) comprising a photocatalyst—including titanium dioxide (Column 13 Lines 33-40), an organosiloxane or fluoroalkyl polymer binder (Column 14 Line 12 – Column 18 Line 15), and a charge facilitator of metal salt as claimed (Column 18 Line 65 – Column 19 Line 10).

Kobayashi does not disclose expressly a layer thickness of between 100 and 1,000 angstroms; however, the claimed range is *prima facie* obvious since the thickness taught by Kobayashi fully embraces the claimed range.

Further, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to reduce the thickness of the layer, for the purpose of making the intended future device smaller, since it has been held that where the general

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conditions of a claim are disclosed in the prior art, discovering optimum or workable ranges involves only ordinary skill in the art (*In re Aller*, 105 USPQ 233).

### ***Response to Arguments***

4. Applicant's arguments filed 21 May 2007 have been fully considered but they are not persuasive.

Applicant argues that Kobayashi fails to teach a layer with a claimed thickness of 100 to 1,000 angstroms asserting that Kobayashi teaches a layer orders of magnitude thicker and in the claimed invention that a thickness of 100 angstroms or more provides wettability properties while a thickness of 1,000 angstroms or less provides good charge transfer properties; However, first, Kobayashi teaches a layer having a thickness ***not more than*** 10  $\mu\text{m}$  thick (Column 31 Lines 54-58 emphasis added) meaning that Kobayashi's thickness ranges from 0 to 10  $\mu\text{m}$  and while the upper limit of Kobayashi may be orders of magnitude greater than the claimed range's upper limit, Kobayashi's range encompasses the instantly claimed range in its entirety; Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., wettability properties and good charge transfer properties) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993); Finally, applicant appears to be arguing that there are unexpected results within the instantly claimed thickness range not found in Kobayashi,

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however there is no data presented comparing the claimed invention to the closest prior art—for example the exemplified layers of Kobayashi.

Applicant further argues that Kobayashi fails to teach the claimed charge injection and/or charge transfer properties; however, since Kobayashi teaches the same composition as claimed, the charge injection/transfer properties of the Kobayashi composition would inherently be the same as claimed.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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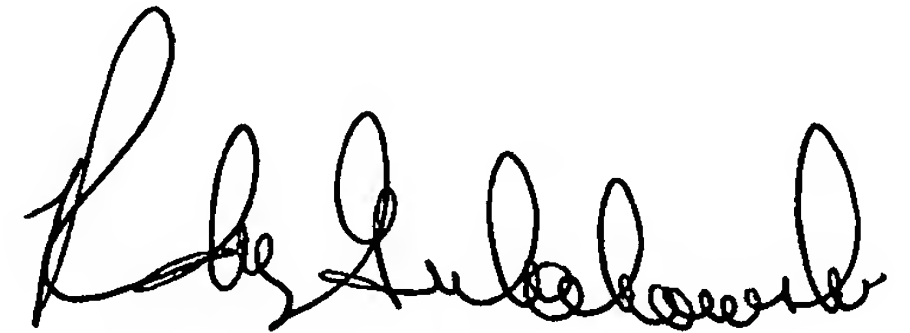
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you have questions on access to the Private PAIR system, contact the Electronic  
Business Center (EBC) at 866-217-9197 (toll-free).

/TJK/

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A handwritten signature in black ink, appearing to read 'Randy Gulakowski', with a stylized, cursive script.

RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700